As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

NUCLEAR FACTORS ASSOCIATED WITH TRANSCRIPTIONAL REGULATION

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| the spe | ecifi | cation of | which (che | eck one) |) | | | |
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| materia | al to | owledge the the exami | nation of | this ap | pplication | n in a | ccord | is ance |
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| | | Pric | r Foreign | Applica | ation(s) | | | rity imed |
| (Numbe | r) | (Country) | (Day/Mont | th/Year | filed) | <u>_</u> | //Yes | No No |
| (Numbe | r) | (Country) | (Day/Mont | th/Year | filed) | | /_/ Yes | No |
| (Numbe | r) | (Country) | (Day/Mon | th/Year | filed) | · | / Yes | /_/ |
| | | | | | | | | |

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
| 07/155,207 | February 12, 1988 | Abandoned |
| 07/280,173 | December 5, 1988 | Pending |
| 07/341,436 | April 21, 1989 | Pending |
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I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration 1 | No. | 22,592 |
|-------------------|----------------|-----|--------|
| James M. Smith | Registration ! | No. | 28,043 |
| Leo R. Reynolds | Registration | No. | 20,884 |
| Richard A. Wise | Registration 1 | | |
| Patricia Granahan | Registration ! | No. | 32,227 |
| Mary Lou Wakimura | Registration : | No. | 31,804 |
| Thomas O. Hoover | Registration : | No. | 32,470 |
| Alice O. Carroll | Registration : | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| and | |
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| Direct telephone calls to: | Patricia Granahan, Esq. |
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| Full name of sole | |
|-------------------------|---|
| or first inventor | David Baltimoro |
| Inventor's | David Daitimore |
| Signature | Data |
| Residence | President's House Pockefollor Universit |
| Trestactive | 1230 York Avenue New York NY 10021 |
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| Post Office Address_ | |
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| | |
| Full name of second jo | pint |
| inventor, if any | Ranjan Sen |
| Second Inventor's | |
| Signature | Date |
| Residence | 236 Allston Street |
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| Citizenship | India |
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| Full name of third join | int |
| inventor if any | Dhillim A. Chaus |
| Third Inventor's | Phillip A. Sharp |
| Signature | Data |
| Residence | Date 119 Grasmere Street Newton, MA 02158 |
| nesidence | Novitor Wa 03150 |
| Citizenshin | Newton, MA 02158 |
| Post Office Address | Newton, MA 02158 U.S.A. same as above |
| rost office Address | same as above |
| | |
| Dull 3 manua 20 0 41 1 | |
| Full name of fourth jo | oint |
| inventor, if any | Harinder Singh |
| rourth inventor's | |
| Signature | Date |
| Residence | 1700 East 56th Street, #1309 |
| | Chicago, IL 60637-1934 |
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| Full name of fifth jo | nint | |
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| inventor, if any | Louis Stands | |
| Fifth Inventor's | Louis Staudt | |
| Signature | Date | |
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| | Silver Springs, MD 20910 | |
| Citizenship | U.S.A. | |
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| Full name of sixth jo | nint | |
| inventor. if any | Jonathan LeBowitz | |
| Sixth Inventor's | CONSCINUIT DEBOWICZ | |
| Signature | Date | |
| Residence | DateDate | |
| | Belmont, MA 02178 | |
| Citizenship | 11. S. A. | |
| Post Office Address | same as above | |
| | | |
| | | |
| Full name of seventh | ioint | |
| inventor, if any | Albert S. Baldwin, Jr. | |
| Seventh Inventor's | Ribert B. Baldwill, Dr. | |
| Signature | Date | |
| Residence | 34 South Gate Park | |
| | West Newton, MA 02165 | |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | |
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| | | |
| Full name of eighth jo | oint G./ | |
| inventor, if any | | |
| Eighth Inventor's | 2 | |
| Signature | Date 0, /12/ 129 | |
| Residence | TO TATOONS ROUGH IN KINDEL FAILL !! | . , |
| | Brighton, MA 02135 Cardin Chile Mark Control | F. : A |
| Crerechanth | Switzerland | (|
| Post Office Address | same as above | |
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| Full name of ninth joi | in t | |
| inventor, if any | Lynn M. Corcoran | |
| Ninth inventor's | Zim ii. corcoraii | |
| Signature | Date | |
| Residence | 109 Beacon Street, Apt. 1 | |
| ··· | Boston, MA 02116 | |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | |

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| Full name of tenth joint | |
|--------------------------|--|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
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| Full name of eleventh j | |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
| Signature | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 |
| Residence | 9117 Falls Chapel Way |
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| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| m. 11 6 | |
| Full name of twelfth jo | int Chan Mina Ro |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | Date: |
| Signature | Date 30 Warren Avenue, Apt. 2A |
| Residence | 30 Warren Avenue, Apt. 2A |
| Git i con ob i c | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| Full name of thirteenth | ioint |
| inventor, if any | |
| Eighth Inventor's | TOM MANIACIS |
| Signature | Date |
| Residence | 456 Belmont Street, Apt. 17 |
| Residence | Watertown, MA 02172 |
| Citizenship | U.S.A. |
| Post Office Address | |
| 103C OIIICC Address | same as above |
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| Full name of fourteenth | ·ioint |
| inventor if any | Joine |
| Ninth inventor's | |
| | Data |
| Posidonco | Date |
| VESTUELICE | |
| Citizenship | |
| 1111176nsnin | |

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| United patent identifier invent | Sta or fied or's | ites Code, § inventor's below any certificat on on which | foreign 119 of certif: foreign te havin | prior any sicate applicate | rity beforeign listed lication filing claime | enefits n appli d below on for date l | unde icatio and i paten paten | r Titin(s) in have a tor that | for also |
| United patent identi invent applic | l Sta : or :fied :or's :atic | ites Code, § inventor's below any certificat on on which | foreign certificertifice having priorition | prior any sicate napping a sity is | rity beforeign | enefits n appli d below on for date h ed: tion(s) | unde icatio and i paten paten | r Titin(s) in have a tor that | for also of the |
| United patent identifier invent | Station (Station) | ites Code, § inventor's below any certificat on on which Pric | foreign certifice having prioris | prionany icate and apply is ign A | rity beforeign | enefits n appli d below on for date l ed: tion(s) | unde icatio and i paten paten | r Title n(s) in have a t or that Pri Cl Yes | for also of the |

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| February 12, 1988 | Abandoned |
| December 5, 1988 | Pending |
| April 21, 1989 | Pending |
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| David E. Brook James M. Smith Leo R. Reynolds Richard A. Wise Patricia Granahan Mary Lou Wakimura Thomas O. Hoover | Registration Registration Registration Registration Registration Registration | No. No. No. No. | 28,043 20,884 18,041 32,227 31,804 32,470 |
|--|--|-----------------|--|
| Alice O. Carroll | Registration | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| and | |
|--|--|
| Send correspondence to: Pa HAMILTON, BROOK, SMITH & REY Two Militia Drive, Lexington | tricia Granahan, Esq. NOLDS, P.C. , MA 02173 |
| Direct telephone calls to: _ | Patricia Granahan, Esq. |
| 617-861-6240 | |

| Full name of sole | |
|---|---|
| or first inventor | David Baltimore |
| Turrantaula | |
| Signature | Date |
| Residence | President's House, Rockefeller Universit |
| | President's House, Rockefeller Universit 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. same as above |
| Post Office Address | same as above |
| COLUMN TO THE | |
| Full name of second je | |
| inventor, if any | Ranjan Sen |
| Second Inventor's | |
| Signature | Date 236 Allston Street Cambridge, MA 92139 |
| Residence | 236 Allston Street |
| Citizenship | Cambridge, MA 92139 |
| Citizenship | India |
| Post Office Address | same as above |
| Full name of third jo | |
| inventor, if any | Phillip A. Sharp |
| Third Inventor's | |
| Signature | Date |
| Residence | Date 119 Grasmere Street Newton, MA 02158 |
| | Newton, MA 02158 |
| Citizensnip | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of fourth jo | |
| inventor, if any | Harinder Singh |
| Fourth Inventor's | |
| Signature | Date |
| Residence | Date 1700 East 56th Street, #1309 |
| | Cnicago, 15 60637-1934 |
| Citizenship | India |
| Post Office Address | same as above |
| | |

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| Full name of fifth joi | nt |
|---------------------------------------|--|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| | Date |
| | 0300 Grevrock ROad |
| | Silver Springs, Ind 20210 |
| all conchin | 11 S A |
| Post Office Address | same as above |
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| | • , |
| Full name of sixth jo | INT |
| inventor, if any | Jonathan LeBowitz |
| Sixth Inventor's | Date |
| Signature | 27 Crescent Road |
| Residence | Belmont, MA 02178 |
| | Belmont, MA 02170 |
| Citizenship | U.S.A. same as above |
| Post Office Address | Salle as above |
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| # # # # # # # # # # # # # # # # # # # | |
| Full name of seventh | ioint |
| inventor if any | Albert S. Baldwin, Jr. |
| Seventh Inventor's | ALDOLO FY |
| Cianature | Date |
| Residence | Calla Darile |
| Residence | West Newton, MA 02165 |
| | |
| Post Office Address | same as above |
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| | |
| Full name of eighth j | oint |
| inventor, if any | Roger Clerc |
| Eighth Inventor's | Daka |
| Signature | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| Citizenship | Switzerland |
| Post Office Address | same as above |
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| | A part (and pass pass date date) and (and pass pass pass pass pass pass pass pas |
| | -! |
| Full name of ninth jo |)INT |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | 31 Bridge Street Port Melbourne, Victoria Australia 3207 |
| Signature | 31 Bridge Street |
| Residence | Port Melhourne Victoria Australia 3207 |
| | U.S.A. |
| Citizenship | |
| Post Office Address | Same as abore |

| Full name of tenth join | : |
|----------------------------------|--|
| | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
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| | The state of the s |
| Full name of eleventh j | oint. |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
| Signature | Date |
| Residence | 9117 Falls Chapel Way Potomac MD 20854-2453 |
| | 10 COMMC: IN 20034-2433 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | TT WELL IN CHACK TIPE. ZA |
| | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| Full name of thirteenth | |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 456 Belmont Street, Apt. 17 |
| Citizonahin | Watertown, MA 02172 U.S.A. |
| Citizenship Post Office Address | |
| 1036 Office Address | same as above |
| | |
| | |
| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | |
| | |
| Citigonohin | |
| Citizenship Post Office Address | |

STATES PATENT AND TRADEM

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| NUCLEA | AR FACTORS ASSOCIATED WITH TRANSCRIPTION | AL REGULATION |
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| the spe | ecification of which (check one) | |
| | is attached hereto. | |
| $I \overline{x} \overline{x} I$ | was filed on November 13, 1991 | as |
| | Application Serial No. 07/791,898 and was amended on | (if applicable) |
| content | hereby state that I have reviewed and uts of the above-identified specification, as amended by any amendment referred t | , including the |
| materia | acknowledge the duty to disclose informal to the examination of this applicationitle 37, Code of Federal Regulations, \$1 | n in accordance |
| | | 1 m! + 1 - 05 |

I hereby claim foreign priority benefits under Title 35, United States Code, \$119 of any foreign application(s) for patent or inventor's certificate listed below and have also-identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

| | Prio | r Foreign Application(s) | Priority Claimed |
|----------|-----------|--------------------------|---------------------|
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |

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|-------------------|--------------|-----|--------|
| James M. Smith | Registration | No. | 28,043 |
| Leo R. Reynolds | Registration | No. | 20,884 |
| Richard A. Wise | Registration | No. | 18,041 |
| Patricia Granahan | Registration | No. | 32,227 |
| Mary Lou Wakimura | Registration | No. | 31,804 |
| Thomas O. Hoover | Registration | No. | 32,470 |
| Alice O. Carroll | Registration | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| Send correspondence to: PHAMILTON, BROOK, SMITH & RE | YNOLDS, P.C. |
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| Full name of sole | | | | |
|------------------------|--|--|--|--|
| or first inventor | David Baltimore | | | |
| Inventor's | | | | |
| Signature | Date | | | |
| Residence | Date President's House, Rockefeller Universi | | | |
| | 1230 York Avenue, New York, NY 10021 | | | |
| Citizenship | U.S.A. | | | |
| Post Office Address | same as above | | | |
| | | | | |
| Full name of second jo | | | | |
| inventor, if any | Ranjan Sen | | | |
| Cogond Inventor/c | | | | |
| Signature | Date 236 Allston Street Cambridge, MA 92139 | | | |
| Residence | 236 Allston Street | | | |
| | Cambridge, MA 92139 | | | |
| Citizenship | India | | | |
| Post Office Address | same as above | | | |
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| Tull name of third ini | (m.t. | | | |
| Full name of third joi | | | | |
| inventor, if any | Phillip A. Sharp | | | |
| Third Inventor's | | | | |
| Signature | Date | | | |
| Residence | 119 Grasmere Street | | | |
| <u></u> | Newton, MA 02158 | | | |
| Citizenship | U.S.A. | | | |
| Post Office Address | same as above | | | |
| | | | | |
| Full name of fourth jo | nint. | | | |
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| inventor, if any | | | | |
| Fourth Inventor's | | | | |
| Signature | Date | | | |
| Residence | 1700 East 56th Street, #1309 | | | |
| | Chicago, IL 60637-1934 | | | |
| Citizenship | India | | | |
| Post Office Address | same as above | | | |
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|---------------------------------|--|
| Full name of fifth joi | |
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. same as above |
| Post Office Address | same as above |
| | |
| | |
| Full name of sixth joi | nt |
| | Jonathan LeBowitz |
| Sixth Inventor's | bonachan bebowiez |
| Signature | Date |
| Residence | |
| nestaches | 27 Crescent Road Belmont, MA 02178 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| Full name of seventh j | |
| | Albert S. Baldwin, Jr. |
| Seventh Inventor's | D = 1 |
| Signature | Date |
| Residence | 34 South Gate Park West Newton, MA 02165 |
| Oitien ohin | West Newton, MA U2165 |
| Citizenship Post Office Address | U.S.A. |
| | same as above |
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| Full name of eighth jo | int |
| inventor, if any | |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| Citizenship | Switzerland |
| Post Office Address | same as above |
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| Full name of ninth joi | |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | • |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| Citigonahin | Boston, MA 02116 |
| Citizenship Post Office Address | U.S.A. |
| POST OTLICE Address | same as above |

| This name of centr join | |
|--|---|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | De la |
| Signature far | 7 Date 12/27/9 |
| Residence | MI DOGETT X.) |
| | D-8031 Elchenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
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| Full name of eleventh j | oint |
| inventor, if any | Michael J. Lenardo |
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| Signature | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 |
| Residence | 9117 Falls Chapel Way |
| | Potomac, MD 20854-2453 |
| Citizenship | U.S.A. |
| Post Office Address | |
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| Full name of twelfth jo | 2 |
| inventor if and | Chan Wine Ban |
| inventor, if any Seventh Inventor's | Chen-ming ran |
| Seventi Inventor 8 | • |
| Signature | Date 30 Warren Avenue, Apt. 2A Somerville, MA 02143 |
| Residence | 30 Warren Avenue, Apt. 2A |
| | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Uffice Address | same as above |
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| | 7 PF OF AT |
| W-33 | |
| Full name of thirteenth | joint |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
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| Residence | |
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| Citizenship | U.S.A. |
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| Full name of fourteenth | ·joint |
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| Ninth inventor's | |
| Signature | Date |
| Residence | |
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| Citizenship | |
| David OCC: | manager A |

As a named inventor, I hereby declare that:

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I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

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| the spec | ification of | which (check | k one) | | |
| / i | s attached he | reto. | • | •• | |
| A | vas filed on application Se and was amende | rial No. 07 | , 1991 /791,898 | as (if | applicable) |
| contents | nereby state to of the above as amended by | -identified | specific | ation, ind | cluding the |
| material | cknowledge th to the exami le 37, Code o | nation of the | his appli | cation in | accordance |
| United Spatent of identification | nereby claim for tates Code, \$ or inventor's led below any c's certification on which | 119 of any : certificate foreign app; e having a : | foreign a listed b lication filing da | pplication below and h for patent ate before | n(s) for nave also- t or |
| | Prio | r Foreign A | oplicatio | on(s) | Priority Claimed |
| (Number) | (Country) | (Day/Month | /Year fil | ed) | Yes No |
| (Number) | (Country) | (Day/Month | /Year fil | .ed) | Yes No |
| (Number) | (Country) | (Day/Month | /Year fil | led) | Yes No |

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
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| 07/280,173 | December 5, 1988 | Pending |
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| 07/162,680 | March 1, 1988 | Abandoned |
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I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration N | No. | 22,592 |
|-------------------|----------------|-----|--------|
| James M. Smith | Registration N | No. | 28,043 |
| Leo R. Reynolds | Registration N | No. | 20,884 |
| Richard A. Wise | Registration N | No. | 18,041 |
| Patricia Granahan | Registration N | No. | 32,227 |
| Mary Lou Wakimura | Registration N | No. | 31,804 |
| Thomas O. Hoover | Registration N | No. | 32,470 |
| Alice O. Carroll | Registration N | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| and | |
|--|-------------------------|
| Send correspondence to: Patricia Granahan, Esq. HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive, Lexington, MA 02173 | |
| Direct telephone calls to: | Patricia Granahan, Esq. |
| 617-861-6240 | |

| Full name of sole | David Baltimore |
|---|---|
| or first inventor Inventor's | David Baitimore |
| Cianaturo | Dato |
| Bigliacure | Prosident's House Poskefeller Universi |
| Residence | Date President's House, Rockefeller Universi 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Doct Office Address | same as above |
| rost Office Address | |
| | |
| Full name of second jo | pint |
| inventor, if any Second Inventor's | капјап Sen |
| second inventor's | . |
| signature | Date 236 Allston Street Cambridge, MA 92139 |
| Residence | 236 Aliston Street |
| | Cambridge, MA 92139 India |
| | India |
| Citizenship | |
| CitizenshipPost Office Address | same as above |
| CitizenshipPost Office Address | same as above |
| Post Office Address | same as above |
| Full name of third joi | nt |
| Full name of third joi inventor, if any | nt Phillip A. Sharp |
| Full name of third joi inventor, if any | nt Phillip A. Sharp |
| Full name of third joi inventor, if any | nt Phillip A. Sharp |
| Full name of third joi inventor, if any Third Inventor's Signature Residence | nt Phillip A. Sharp Date |
| Full name of third joi inventor, if any Third Inventor's Signature Residence | nt Phillip A. Sharp Date |
| Full name of third joi inventor, if any | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth joinventor, if any Fourth Inventor's Signature Residence Residence | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above int Harinder Singh Date 1700 East 56th Street, #1309 |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth joinventor, if any Fourth Inventor's Signature Residence Residence | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above Date 1700 East 56th Street, #1309 Chicago, IL 60637-1934 |
| Full name of third joi inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's Signature Residence | nt Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above Date 1700 East 56th Street, #1309 Chicago, IL 60637-1934 India |

| Full name of fifth join | t |
|-------------------------|--|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | |
| Full name of sixth join | |
| inventor, if any | Jonathan LeBowitz |
| Sixth Inventor's | |
| Signature | Date 27 Crescent Road Rolmont MA 02178 |
| Residence | 27 Crescent Road |
| | Deliione, MA 02170 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | |
| | |
| Full name of seventh jo | |
| inventor, if any | Albert S. Baldwin, Jr. |
| Seventh Inventor's | |
| Signature | Date |
| Residence | 34 South Gate Park |
| | West Newton, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of eighth joi | |
| inventor, if any | Roger Clerc |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| Citizenship | Switzerland |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of ninth join | |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |

)

| Full name of tenth joint | |
|--------------------------|--|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | camo ac aborro |
| 1030 Office Madress | same as above |
| | |
| | |
| Full name of eleventh j | oint |
| inventor if and | 01116 |
| inventor, if any | Michael J. Lenardo |
| Sixth inventor's | Michael J. Lenardo Date 1/6/91 9117 Falls Chapel Way |
| Signature // who | Date 1/6/71 |
| Residence ^ | 9147 Falls Chapel Way |
| | Potomac, MD 20854-2453 |
| Citizenship | 91/17 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. |
| Post Office Address | same as above |
| • | |
| | |
| | |
| Full name of twelfth jo | int |
| inventor, if any | |
| Seventh Inventor's | |
| Signature | Dat e |
| Residence | 30 Warren Avenue, Apt. 2A |
| NCO I de l'OC | Somerville MA 02142 |
| Citizenship | Somerville, MA 02143 Taiwan |
| Doct Office lideress | raiwali |
| Post Office Rouless_ | same as above |
| | |
| | |
| Full name of thirteenth | ioint |
| inventor if any | Tom Maniatin |
| inventor, if any | TOM Maniatis |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 456 Belmont Street, Apt. 17 |
| | Watertown, MA 02172 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | |
| | Date |
| Residence | ~~~~ |
| | |
| Citizenship | |
| Post Office Address | |
| | |

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H

Declaration for Patent Application

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

NUCLEAR FACTORS ASSOCIATED WITH TRANSCRIPTIONAL REGULATION

| /_/ is attached hereto. | |
|---|--------------------|
| was filed on November 13, 1991 Application Serial No. 07/791,898 and was amended on | as (if applicable) |

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, \$119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

| | Pric | r Foreign Application(s) | |
|----------|-----------|--------------------------|---------------------|
| | | | Priority Claimed |
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |
| (Number) | (Country) | (Day/Month/Year filed) | Yes No |

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
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| Patricia Granahan | Registration | No. | 32,227 |
| Mary Lou Wakimura | Registration | No. | 31,804 |
| Thomas O. Hoover | Registration | No. | 32,470 |
| Alice O. Carroll | Registration | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| anu | | |
|--|-------------------------|--|
| Send correspondence to: Patricia Granahan, Esq. HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive, Lexington, MA 02173 | | |
| Direct telephone calls to: | Patricia Granahan, Esq. | |
| 617-861-6240 | | |

| Full name of sole | |
|------------------------|---|
| | David Baltimore |
| Inventor's | 24 24 24 24 24 24 24 24 24 24 24 24 24 2 |
| Signature | ·Date |
| Pasidence | President's House, Rockefeller Universit |
| Restuction | President's House, Rockefeller Universit 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of second jo | oint |
| inventor, if any | |
| Second Inventor's | |
| Signature | Date 236 Allston Street Cambridge, MA 92139 India |
| Residence | 236 Allston Street |
| | Cambridge, MA 92139 |
| Citizenship | India |
| Post Office Address | same as above |
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| | |
| Full name of third joi | .nt. |
| | Phillip A. Sharp |
| Third Inventor's | |
| Signature | Date |
| Residence | Date 119 Grasmere Street Newton, MA 02158 |
| | Newton, MA 02158 |
| Citizenship | II C A |
| Post Office Address | same as above |
| | |
| | |
| Full name of fourth jo | |
| inventor, if any | Harinder Singh |
| Fourth Inventor's | |
| Signature | Date |
| Residence | 1700 East 56th Street, #1309 |
| | Chicago, IL 60637-1934 |
| Citizenship | India |
| Post Office Address | same as above |
| | |

| Full name of fifth join | t |
|------------------------------------|--|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | 9309 Greyrock Road Silver Springs, MD 20910 |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | |
| Full name of sixth joir | .+ |
| | |
| Sixth Inventor's | Jonathan LeBowitz |
| | Date |
| Signature | 27 Crescent Road |
| Residence | Belmont, MA 02178 |
| Citizenship | U.S.A. |
| Post Office Address | |
| 1000 011100 | bane ab above |
| | |
| | |
| Full name of seventh jo | pint |
| inventor, if any | Albert S. Baldwin, Jr. |
| Seventh Inventor's | |
| Signature | Date |
| Residence | 34 South Gate Park |
| | West Newton, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| mull warm of sighth for | int- |
| Full name of eighth joi | |
| inventor, if any Eighth Inventor's | Rodel Cleic |
| Signature | Date |
| Residence | 129 Parsons Road |
| Kesidence | Brighton, MA 02135 |
| Citizenship | Switzerland |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of ninth join | nt |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |

| Full name of tenth join | | |
|--|--|--------------|
| inventor, if any | Patrick A. Baeuerle | |
| Fifth Inventor's | | - |
| SignatureResidence | Date | |
| Residence | Am Bogen 25 | |
| | b 6051 Elchenau, Germany | - |
| Citizenship | Germany | |
| Post Office Address | same as above | - |
| | | - |
| | | - |
| Full name of eleventh | oint | |
| | Michael J. Lenardo | |
| Sixth Inventor's | | |
| Signature | Date | |
| Residence | Date 9117 Falls Chapel Way Potomac MD 20054-2452 | - |
| | Potomac, MD 20854-2453 | - |
| Citizenship | U.S.A. | - |
| Post Office Address | same as above | - |
| | | - |
| | | • |
| Full name of twelfth jo | pint | |
| inventor, if any | Chen-Ming Fan | |
| | | |
| Signature | Date 130/9/ | |
| Residence | 30 Warren Avenue, Apt. 2A 1016 Funste. | 11 A1 # 11 / |
| | Somerville, MA - 02143 Sau Flancisco | 11/11C. |
| Citizenship | Talwan | 10111 62127 |
| Post Office Address | same as above | |
| and the set of the set | | |
| | | |
| Full name of thirteenth | | |
| inventor, if any | Tom Maniatis | |
| Eighth Inventor's | | |
| Signature | Date | |
| Residence | Date 456 Belmont Street, Apt. 17 | |
| | Watertown, MA 02172 | |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | |
| *** | | |
| | | |
| Full name of fourteenth | ojoint of the state of the stat | |
| inventor, if any | | |
| Ninth inventor's | | |
| Signature_ | Date | |
| Residence | | |
| Citizenship | | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| NUCLE | AR FACTO | RS ASSOC | CIATED WIT | TH TRANSC | RIPTIONA | L REG | ULATIO | 4- |
|-----------------------------|--|---|--|--|--|--------------------------|-------------------------|--------------|
| the sp | ecificati | ion of w | hich (che | ck one) | | | | |
| | is attac | ched her | eto. | | • | | | |
| <u>/xx/</u> | was file Applicat and was | tion Ser | November ial No on | 13, 1991 07/791,89 | | as (if a | pplical | ole). |
| conten | ts of the | above- | at I have identifie any amend | d specif | ication, | incl | uding t | i he |
| materi | al to the | e examin | duty to ation of Federal | this app | lication | in a | ccordar | ls nce |
| United patent identi invent | States of inversion of the states of the sta | Code, \$1 ntor's c ow any f tificate | oreign pri 19 of any ertificat foreign ap having a priority i | foreign e listed plication filing | applica below a n for pa date bef | tion(ind ha itent | s) for ve also or | o- |
| | | Prior | Foreign | Applicat | ion(s) | | Priori Clair | |
| (Numbe | er) (Co | untry) | (Day/Mont | ch/Year f | iled) | | Yes / | // No |
| (Numbe | er) (Co | untry) | (Day/Mont | h/Year f | iled) | | Yes 1 | / |
| (Numbe | er) (Co | untry) | (Day/Mont | h/Year f | iled) | | Yes I | / NO |

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| Leo R. Reynolds | Registration | No. | 20,884 |
| Richard A. Wise | Registration | No. | 18,041 |
| Patricia Granahan | Registration | No. | 32,227 |
| Mary Lou Wakimura | Registration | No. | 31,804 |
| Thomas O. Hoover | Registration | No. | 32,470 |
| Alice O. Carroll | Registration | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

| and | |
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| Send correspondence to: PHAMILTON, BROOK, SMITH & RETWO Militia Drive, Lexingto | |
| Direct telephone calls to: | Patricia Granahan, Esq. |
| 617-861-6240 | |

| Full name of sole | | | |
|---|---|--|--|
| or first inventor | David Baltimore | | |
| Inventor's | | | |
| Signature | Date | | |
| Residence | President's House, Rockefeller Universi | | |
| | 1230 York Avenue, New York, NY 10021 | | |
| Citizenship | U.S.A. | | |
| Post Office Address | same as above | | |
| | | | |
| Full name of second jo | | | |
| inventor, if any | Ranjan Sen | | |
| Second Inventor's | | | |
| Signature | Date | | |
| Residence | 236 Allston Street | | |
| | Cambridge, MA 92139 | | |
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| Post Office Address | same as above | | |
| | | | |
| Full name of third jo | | | |
| inventor, if any | Phillip A. Sharp | | |
| Third Inventor's | | | |
| Signature | Date | | |
| Residence | II9 Grasmere Street | | |
| | | | |
| Citizenship | U.S.A. | | |
| Post Office Address | same as above | | |
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| Full name of fourth jo | | | |
| inventor, if any | Harinder Singh | | |
| Fourth Inventor's | | | |
| Signature | Date | | |
| Residence | 1700 East 56th Street, #1309 | | |
| | Chicago, IL 60637-1934 | | |
| Citizenship | India | | |
| Post Office Address | same as above | | |
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| Full name of fifth join | t |
|-------------------------|--|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| Full name of sixth join | |
| inventor, if any | Jonathan LeBowitz |
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| | Relmont, MA 02178 |
| Citizenship | U.S.A. |
| Post Office Address | U.S.A. same as above |
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| | |
| 7.11 of | |
| Full name of seventh jo | |
| Seventh Inventor's | Albert S. Baldwin, Jr. |
| | Data |
| Bosidona | Date 34 South Gate Park |
| Residence | 34 South Gate Park |
| | west newton, MA U2165 |
| Post Office Address | U.S.A. |
| rost office Address | same as above |
| | |
| | |
| Full name of eighth joi | nt. |
| inventor, if any | |
| Eighth Inventor's | 1.0gc1 01c10 |
| Signature | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| Citizenship | Switzerland |
| | same as above |
| | |
| | ************************************** |
| | |
| Full name of ninth join | t |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |

| Full name of tenth join | t [:] | |
|---|--|---|
| | Patrick A. Baeuerle | |
| Fifth Inventor's | _ | |
| Signature | Date | |
| Residence | Am Bogen 25 | |
| | D-8031 Eichenau, Germany | |
| Citizenship | Date Am Bogen 25 D-8031 Eichenau, Germany Germany | |
| Post Office Address | same as above | |
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| مين فين فين بين وين وين وين وين فين فين فين فين وين وين وين وين وين وين وين وين وين | يتن من | |
| Full name of eleventh j | oint | |
| inventor, if any | Michael J. Lenardo | |
| SIYED UNVENTOUS | | |
| Signature | Date | |
| Residence | 9117 Falls Chapel Way | |
| | Potomac, MD 20854-2453 | |
| Citizenship | U.S.A. | |
| Post Office Address | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. same as above | |
| | | |
| man dan dan dan dan dan tah tah tah dan | | |
| Full name of twelfth jo | int | |
| inventor, if any | Chen-Ming Fan | |
| Seventh Inventor's | | |
| Signature | Date | |
| Residence | Date 30 Warren Avenue, Apt. 2A | |
| | Somerville, MA 02143 | |
| Citizenship | Taiwan | |
| Post Office Address | Somerville, MA 02143 Taiwan same as above | |
| | | |
| | | |
| Full name of thirteenth | | |
| inventor, if any | Tom Maniatis Thomas P. Maniatis | |
| Eighth Inventor's // | ille to dealist | |
| Signature // Consi | Date 1/22/97 456 Belmont Street, Apt. 17 187 Marsh Street | |
| Residence | -456 Belmont Street, Apt. 17 187 Marsh Street | |
| | Watertown, MA 02172 Belmont, MA 02178 | ļ |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | |
| | | |
| • | | |
| Full name of fourteenth | oint oint | |
| inventor, if any | • | |
| Ninth inventor's | IM A | |
| Signature Mondon | Money Date 1/72/91 | |
| Residence | | |
| | | |
| Citizenship | | |
| 121 (1 to 1 | | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| NUCLEAR | FACTORS ASSO | CIATED WI | TH TRAN | SCRIPTIO | NAL RE | GULATI | ON |
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| the speci | fication of | which (che | eck one) |) | | | |
| i is | attached he | reto. | | | | | |
| Ap | s filed on _ plication Se d was amende | rial No | 13, 199 07/791, | 1 898 | _ as - (if | applic | able) |
| contents | reby state t of the above s amended by | -identifie | d speci | fication | n, inc | luding | |
| material | knowledge th to the exami e 37, Code o | nation of | this ap | plication | on in | accord | is ance |
| United St patent or identifie inventor' | reby claim fates Code, Sinventor's discount any size certification on which | 119 of any certificat foreign ap e having a | y foreig ce liste plicati a filing | n applied below on for particular to the contract of the contr | cation and h patent | (s) fo ave al or | so- |
| | Prio | r Foreign | Applica | tion(s) | | | rity |
| (Number) | (Country) | (Day/Mont | h/Year | filed) | | /Yes | /No |
| (Number) | (Country) | (Day/Mont | h/Year | filed) | | Yes | /No |
| (Number) | (Country) | (Day/Mont | h/Year | filed) | | <u>/_/</u> Yes | Mo |
| | | | | | | | |

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
| 07/155,207 | February 12, 1988 | Abandoned |
| 07/280,173 | December 5, 1988 | Pending |
| 07/341,436 | April 21, 1989 | Pending |
| 07/162,680 | March 1, 1988 | Abandoned |
| 07/318,901 | March 3, 1989 | Pending |
| 06/946,365 | December 24, 1986 | Pending |

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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| Registration No. 22,59 | |
|------------------------|---|
| Registration No. 28,04 | 3 |
| Registration No. 20,88 | 4 |
| Registration No. 18,04 | 1 |
| Registration No. 32,22 | 7 |
| Registration No. 31,80 | 4 |
| Registration No. 32,47 | 0 |
| Registration No. 33,54 | |
| | Registration No. 28,04 Registration No. 20,88 Registration No. 18,04 Registration No. 32,22 Registration No. 31,80 Registration No. 32,47 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

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| Send correspondence to: P HAMILTON, BROOK, SMITH & RE Two Militia Drive, Lexingto | |
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| 617-861-6240 | |

| Full name of sole or first inventor | David Baltimore | | | | |
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| Inventor's | DUATO DUITTHOIE | | | | |
| Signature | Date | | | | |
| Residence | President's House, Rockefeller University 1230 York Avenue, New York, NY 10021 | | | | |
| 1.051.401100 | 1230 York Avenue, New York, NY 10021 | | | | |
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| Post Office Address | same as above | | | | |
| | | | | | |
| Full name of second jo | | | | | |
| inventor, if any | Ranjan Sen | | | | |
| Second Inventor's | Date | | | | |
| Pasidence | Date 236 Allston Street Cambridge, MA 92139 | | | | |
| Kestdelice | Cambridge, MA 92139 | | | | |
| Citizenship | India | | | | |
| Post Office Address | same as above | | | | |
| Third Inventor's | Phillip A. Sharp | | | | |
| Pesidence | Date | | | | |
| Residence | Date 119 Grasmere Street Newton, MA 02158 U.S.A. | | | | |
| Citizenship | U.S.A. | | | | |
| Post Office Address | same as above | | | | |
| Full name of fourth jo | oint | | | | |
| | Harinder Singh | | | | |
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| Residence | 1700 East 56th Street, #1309 | | | | |
| | Chicago, IL 60637-1934 | | | | |
| Citizenship | India | | | | |
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| | | | | | |

| Full name of fifth join | | | | | | |
|-----------------------------------|---|--|--|--|--|--|
| inventor, if any Louis Staudt | | | | | | |
| fth Inventor's A michigan | | | | | | |
| Signature Jag | m M Hand Date 1-10-92 | | | | | |
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| | Silver Springs, MD 20910 | | | | | |
| Citizenship | U.S.A. | | | | | |
| Post Office Address | same as above | | | | | |
| | | | | | | |
| | # C C C C C C C C C C C C C C C C C C C | | | | | |
| Full name of sixth join | + | | | | | |
| inventor if any | Tonathan ToDowitz | | | | | |
| inventor, if any Sixth Inventor's | Jonathan repowitz | | | | | |
| | Date | | | | | |
| Signature_ | 27 Crescent Road | | | | | |
| Residence | Belmont, MA 02178 | | | | | |
| Citizenshin | TIC A | | | | | |
| Post Office Address | U.S.A. | | | | | |
| 1000 011100 | Same as above | | | | | |
| <u></u> | ###################################### | | | | | |
| | | | | | | |
| Full name of seventh jo | int | | | | | |
| | Albert S. Baldwin, Jr. | | | | | |
| Seventh Inventor's | | | | | | |
| Signature | Date | | | | | |
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| Citizenship | U.S.A. | | | | | |
| Post Office Address | same as above | | | | | |
| | | | | | | |
| | | | | | | |
| mull warms of simbab isi | | | | | | |
| Full name of eighth joi | | | | | | |
| inventor, if any | Roger Clerc | | | | | |
| Eighth Inventor's | Data | | | | | |
| Signature | Date | | | | | |
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| Citizenship | Brighton, MA 02135 Switzerland | | | | | |
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| rost office Address | Same as above | | | | | |
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| Full name of ninth join | t . | | | | | |
| inventor, if any | | | | | | |
| Ninth inventor's | 27 002002411 | | | | | |
| Signature | Date | | | | | |
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| | Boston, MA 02116 | | | | | |
| Citizenship | U.S.A. | | | | | |
| Post Office Address | | | | | | |
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| rull name of tenth joins | |
|--------------------------|---|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Elchenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
| | |
| | و من جين جين جين مين من من من هن جي |
| | |
| Full name of eleventh j | oint |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
| Signature | Date |
| Residence | 9117 Falls Chapel Way |
| | Potomac, MD 20854-2453 |
| Citizenship | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | Date 30 Warren Avenue, Apt. 2A |
| | Somerville, MA 02143 |
| Citizenship | Talwan |
| Post Office Address | same as above |
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| | |
| | |
| Full name of thirteenth | |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
| Signature | Date 456 Belmont Street, Apt. 17 Watertown MA 02172 |
| Residence | 456 Belmont Street, Apt. 17 |
| | "ACCI COWIT, I'M 021/2 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of fourteenth | ·joint |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | |
| | |
| Citizenship | · · · · · · · · · · · · · · · · · · · |
| Post Office Address | |
| | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| NUCLEAR 1 | FACTORS ASSO | CIATED WIT | H TRANSCR | IPTIONAL RE | EGULATION |
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| the specif | fication of v | hich (che | ck one) | | |
| / is | attached her | reto. | • | • | |
| Apr | s filed on | rial No. 0 | 3, 1991 7/791,898 | as (if | applicable). |
| contents (| reby state thof the aboves a mended by | -identifie | d specifi | cation, inc | cluding the |
| material ' | knowledge the to the examin e 37, Code o | nation of | this appl | ication in | accordance |
| United St patent or identifie inventor' | reby claim for ates Code, \$ inventor's of below any secretification on which | 119 of any certificat foreign ap e having a | foreign e listed plication filing d | application below and land for patent ate before | n(s) for _ have also- t or |
| | Prio | r Foreign | Applicati | on(s) | Priority Claimed |
| (Number) | (Country) | (Day/Mont | h/Year fi | led) | // /_/ Yes No |
| (Number) | (Country) | (Day/Mont | h/Year fi | led) | Yes No |
| (Number) | (Country) | (Day/Mont | h/Year fi | led) | Yes No |

I hereby claim the benefit under Title 35, United States Code, \$120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, \$112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, \$1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
| 07/155,207 | February 12, 1988 | Abandoned |
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As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration | | |
|-------------------|--------------|-----|--------|
| James M. Smith | Registration | No. | 28,043 |
| Leo R. Reynolds | Registration | No. | 20,884 |
| Richard A. Wise | Registration | No. | 18,041 |
| Patricia Granahan | Registration | No. | 32,227 |
| Mary Lou Wakimura | Registration | No. | 31,804 |
| Thomas O. Hoover | Registration | No. | 32,470 |
| Alice O. Carroll | Registration | No. | 33,542 |
| | | | |

| | atricia Granahan, Esq. |
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| HAMILTON, BROOK, SMITH & RE | |
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| Direct telephone calls to: | Patricia Granahan, Esq. |
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| Full name of sole | |
|---|--|
| or first inventor | David Baltimore |
| Inventor's | Duviu Dureimore |
| Signature | Date |
| Posidonce | President's House, Rockefeller Universi |
| Residence | President's House, Rockefeller Universities 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| Full name of second jo | |
| inventor, if any | kanjan Sen |
| Second Inventor's | Daha |
| Signature | Date Date |
| residence | Date 236 Allston Street Cambridge, MA 92139 |
| | Cambridge, MA 92139 |
| Citizanchin | Tadia |
| Citizensnib | India |
| Post Office Address | India same as above |
| Full name of third jo: inventor, if any Third Inventor's | int Phillip A. Sharp |
| Full name of third jo: inventor, if any Third Inventor's Signature | int Phillip A. Sharp Date |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence | int Phillip A. Sharp Date 119 Grasmere Street |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence | int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence | int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth joinventor, if any Fourth Inventor's | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above oint Harinder Singh |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's Signature | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above oint Harinder Singh Date |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth jo inventor, if any Fourth Inventor's Signature | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above oint Harinder Singh Date 1700 East 56th Street, #1309 |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth joinventor, if any Fourth Inventor's Signature Residence | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above oint Harinder Singh Date 1700 East 56th Street, #1309 Chicago, IL 60637-1934 |
| Full name of third jo: inventor, if any Third Inventor's Signature Residence Citizenship Post Office Address Full name of fourth joinventor, if any Fourth Inventor's | India same as above int Phillip A. Sharp Date 119 Grasmere Street Newton, MA 02158 U.S.A. same as above oint Harinder Singh Date 1700 East 56th Street, #1309 |

| | -4- |
|---------------------------|---|
| Full name of fifth jo | |
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | gar gas dan can can can can can can can can can c |
| Full name of sixth jo | int |
| inventor, if any | Jonathan LeBowitz JONATHAN H. LeBowitz |
| Sixth Inventor's | -T In 1. 1. 1. |
| Signature \(\frac{1}{4}\) | Date 2/12/92 |
| Residence | 27 Crescent Road 35 IRONGATE Deve |
| Citionship | Belmont, MA 02178 ZIONSVIlle, IN 46077 |
| Citizenship Nddross | U.S.A. USA USA Same as above |
| Post Office Address | same as above |
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| Full name of seventh | ioint |
| inventor. if any | Albert S. Baldwin, Jr. |
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| Signature | Date |
| Residence | 34 South Gate Park |
| | West Newton, MA 02165 |
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| Post Office Address | same as above |
| | |
| Full name of eighth j | oint |
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| Signature | Date |
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| | Brighton, MA 02135 |
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| Post Office Address | same as above |
| | |
| Eull name of minth in | int |
| Full name of ninth jo | |
| Ninth inventor's | Lynn M. Corcoran |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| Westnesse | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| LUDE ULLION MAGNETON | |

| Full name of tenth joint | • |
|--|--|
| inventor, if any | |
| Fifth Inventor's | |
| Signature | Date |
| Residence | Am boden 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
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| mull mame of alamanth d | 221 |
| Full name of eleventh j | |
| Sixth Inventor's | Michael J. Lenardo |
| | Date |
| Pasidence | 9117 Falls Chapel Way |
| Residence | 9117 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| and the same of th | |
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| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | Date 30 Warren Avenue, Apt. 2A Somerville, MA 02143 |
| | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Office Address | same as above |
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| | |
| Full name of thirteenth | ioint |
| inventor, if any | |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 456 Belmont Street, Apt. 17 |
| | Watertown, MA 02172 |
| | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | note. |
| Signature | Date |
| Residence | • |
| Citizenship | |
| CTCT76H2HTh | |

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NUCLEAR FACTORS ASSOCIATED WITH TRANSCRIPTIONAL REGULATION

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|-----------------------------------|---|---|--|-----------------------------------|
| the spe | ecification of | which (check one |) | |
| | is attached he | reto. | | |
| | was filed on Application Se and was amende | November 13, 199 erial No. 07/791, ed on | 000 | f applicable) |
| content | ts of the above | hat I have reviewed any amendment re | ification, i | ncluding the |
| materia | al to the exami | e duty to disclo nation of this a of Federal Regula | pplication i | n accordance |
| United patent identifier inventor | States Code, § or inventor's fied below any or's certificat | oreign priority in the second of any foreign certificate list foreign applicate having a filing priority is claim | gn applicati ed below and ion for pate g date befor | on(s) for _ have also nt or |
| | Pric | or Foreign Applic | ation(s) | Priority Claimed |
| (Number | c) (Country) | (Day/Month/Year | filed) | Yes No |
| (Number | c) (Country) | (Day/Month/Year | filed) | Yes No |
| (Number | (Country) | (Day/Month/Year | filed) | Yes No |
| | | | | |

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| David E. Brook | Registration No. 22,592 |
|-------------------|-------------------------|
| James M. Smith | Registration No. 28,043 |
| Leo R. Reynolds | Registration No. 20,884 |
| Richard A. Wise | Registration No. 18,041 |
| Patricia Granahan | Registration No. 32,227 |
| Mary Lou Wakimura | Registration No. 31,804 |
| Thomas O. Hoover | Registration No. 32,470 |
| Alice O. Carroll | Registration No. 33,542 |

| and | |
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| Send correspondence to: PHAMILTON, BROOK, SMITH & RETWO Militia Drive, Lexingto | |
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| Full name of sole | | | |
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| or first inventor | David Baltimore | | |
| Inventor's | | | |
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| Citizenship | U.S.A. | | |
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| inventor, if any | Ranjan Sen | | |
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| Signature | Date | | |
| Residence | 236 Allston Street | | |
| Citizenship | Cambridge, MA 92139 | | |
| Doct Office National | India | | |
| Post Office Address | same as above | | |
| | | | |
| Full name of third joi | int | | |
| inventor if any | Dhillin A Chaus | | |
| Third Inventor's | Phillip A. Sharp | | |
| Signature | Data | | |
| Signature | | | |
| residence | 119 Grasmere Street | | |
| Citizonchin | Newton, MA 02158 U.S.A. | | |
| Post Office Address | U.S.A. | | |
| rost Office Address | same as above | | |
| | | | |
| Full name of fourth jo | pint | | |
| inventor, if any | Harinder Singh | | |
| Fourth Inventor's | | | |
| Signature | Date | | |
| Residence | 1/00 East 56th Street. #1309 | | |
| | | | |
| Citizenship | INGla | | |
| Post Office Address | same as above | | |
| | | | |
| | | | |

| | -4- | |
|------------------------|---------------------------------------|-------------|
| Full name of fifth jo | | |
| inventor, if any | Louis Staudt | |
| Fifth Inventor's | | |
| Signature | Date | |
| Residence | 9309 Greyrock Road | |
| | Silver Springs, MD 20910 | |
| Citizenship | U.S.A. | |
| Post Office Address_ | same as above | |
| | | |
| Full name of sixth jo | int | |
| inventor, if any | Jonathan LeBowitz | |
| Sixth Inventor's | | |
| Signature | DateDate | |
| Residence | 27 Crescent Road | |
| | Belmont, MA 02178 | |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | |
| | | |
| Full name of seventh | ioint | |
| inventor, if any | Albert S. Baldwin, Jr. | |
| | | - |
| Signature ///wit | 1. Balduin 9 Date 12/31/91 | |
| Residence | 34 South Gate Park 901 GROVE ST. | • |
| | West Newton, MA 02165 CHAPEL HILL, NC | 1251V |
| Citizenship | U.S.A. | |
| Post Office Address | same as above | 12/30/91 |
| | | • |
| Full name of eighth j | oint | |
| inventor, if any | Roger Clerc | |
| Eighth Inventor's | | |
| Signature | Date | |
| Residence | 129 Parsons Road | |
| | Brighton, MA 02135 | , |
| Citizenship | Switzerland | |
| Post Office Address | same as above | |
| | | |
| Full name of ninth jos | int | |
| inventor, if any | Lynn M. Corcoran | |
| Ninth inventor's | 2jiii ii. corcoran | |
| Signature | Date | |
| Residence | 109 Beacon Street, Apt. 1 | |
| | Boston, MA 02116 | |
| Citizenship | U.S.A. | |
| Post Office Address | | |

| rull name of tenth joing | |
|--------------------------|--|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| SignatureResidence | Am Bogen 25 |
| | - oos oos - oo |
| Citizenship | Germany |
| Post Office Address | same as above |
| | |
| | و من |
| | |
| Full name of eleventh j | |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
| Signature | 9117 Falls Chapel Way |
| Residence | 9117 Falls Chapel Way |
| | FOLOMAC, MD 20834-2433 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | Date 30 Warren Avenue, Apt. 2A Somerville, MA 02143 |
| | |
| Citizenship | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| - | |
| Full name of thirteenth | |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 430 beimont Street, Apt. 1/ |
| | Watertown, MA 02172 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | و من |
| | |
| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | |
| Signature_ | Date |
| Residence | |
| • | |
| Citizenship | |
| Prot Office ? ?? | |

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents Washington, DC 20231

REVOCATION OF PRIOR POWERS OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY

Sir:

Massachusetts Institute of Technology, the Assignee of certain rights, titles and interest in the patent applications listed below by virtue of Assignment documents of record in the Patent Office, hereby revokes all previous powers of attorney with respect to these patent applications heretofore granted and appoints the following attorneys with full power of substitution and revocation to prosecute applications and transact all business in the U.S. Patent and Trademark Office connected therewith:

| Donald W. Muirhead | Reg. No. 33,978 | Charles H. Cella | Reg. No. 38,099 |
|--------------------|-------------------------|----------------------|-----------------|
| Beth E. Arnold | Reg. No. 35,430 | John C. Gorecki | Reg. No. 38,471 |
| Matthew P. Vincent | Reg. No. 36,709 | Edward J. Kelly | Reg. No. 38,936 |
| Isabelle M. Clauss | Reg. No. (see attached) | Sayoko Blodgett-Ford | Reg. No. 40,516 |

all of the Patent Group of Foley, Hoag & Eliot LLP at One Post Office Square, Boston, MA 02109.

| APPLICANTS | SERIAL NO. | TITLE | FILING DATE |
|----------------------------------|------------|---|---------------|
| Baltimore, et al. | 08/418,266 | Nuclear Factors Associated with Transcriptional Regulation | 06 April 1995 |
| Baltimore, et al. | 08/463,397 | Nuclear Factors Associated with Transcriptional Regulation | 05 June 1995 |
| Baltimore, et al. | 08/464,364 | Nuclear Factors Associated with Transcriptional Regulation | 05 June 1995 |
| Pomerantz, et al. | 08/366,083 | Chimeric Transcription Factors | 29 Dec. 1994 |
| Sen, R. and Baltimore, D. | 946,365 | Method of Inducible Gene Expression | 23 Dec. 1986 |
| Baeurie, P. and Baltimore, D. | 07/162,680 | Activation of NF-kB Precursor | 01 March 1988 |
| Baeurle, P. and Baltimore, D. | 07/318,901 | Activation of NF-kB Precursor | 03 March 1989 |
| Lenardo, et al. | 07/341,436 | NF-xB - Mediated Transcriptional Regulation | 21 April 1989 |

The undersigned, whose title is supplied below, is empowered to sign this Revocation and New Power of Attorney on behalf of the Assignee. The original copy of this Revocation and New Power of Attorney is being filed in U.S. Patent Application No. 08/418,266.

Dated: <u>(ct 30, 1997</u>

JARMILA Z. HRBEK

PRINT OR TYPE NAME OF PERSON SIGNING

TITLE Office Manager

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GENERAL REVOCATION OF PRIOR POWERS OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY OR AUTHORIZATION OF AGENTS

Commissioner for Patents Washington, DC 20231

Dear Sir:

Ariad Pharmaceuticals, Inc., hereby revokes all previous powers of attorney and authorizations of agent previously granted to Foley, Hoag & Eliot.

The following attorneys or agents of the Patent Group at Ropes & Gray, and all other attorneys or agents affiliated with Customer No. 28120, are hereby appointed to prosecute applications and transact all business in the United States Patent and Trademark Office:

I hereby appoint Madeline F. Baer, Reg. No. 36,437; Steven J. Baughman, Reg. No. P-47,414; Johnny Y. Chen, Reg. No. 46,614; Gregory G. Glover, Reg. No. 34,173; William G. Gosz, Reg. No.: 27,787, Patricia Granahan, Reg. No. 32,227; David P. Halstead, Reg. No. 44,735; Daniel Hansburg, Reg. No. 36,156; Edward J. Kelly, Reg. No. 38,936; Robert A. Mazzarese, Reg. No. 42,852; Sanjay Sitlani, Reg. No. 47,558; Wolfgang Stutius, Reg. No. 40,256; Matthew P. Vincent, Reg. No. 36,709; as attorneys/agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

Patent Group Ropes & Gray One International Place Boston, MA 02110-2624

Customer No.: 28120

The undersigned, whose title is supplied below, is empowered to sign this Revocation and New Power of Attorney on behalf of the Assignee.

The original copy of this Revocation and New Power of Attorney is being filed in U.S. Patent Application No. 08/975,040.

Respectfully submitted,

Officer

DANIO L BERSEIN

Print or Type Name of Person Signing

SEMOR VP- CHIEF PARENT COUNSEL

Title

8551955.1

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| entitle | ed. | |
|-----------------------------|---|---------------------------|
| NUCLE | AR FACTORS ASSOCIATED WITH TRANSCRIPTIONAL RE | GULATION |
| | • | |
| the spe | ecification of which (check one) | |
| | is attached hereto. | |
| <u>[xx]</u> | was filed on November 13, 1991 as Application Serial No. 07/791,898 (if and was amended on | applicable) |
| content | hereby state that I have reviewed and unders ts of the above-identified specification, inc , as amended by any amendment referred to abo | luding the |
| materi | acknowledge the duty to disclose information al to the examination of this application in itle 37, Code of Federal Regulations, \$1.56(a | accordance |
| United patent identi invent | hereby claim foreign priority benefits under States Code, \$119 of any foreign application or inventor's certificate listed below and he fied below any foreign application for patent or's certificate having a filing date before ation on which priority is claimed: | (s) for ave also or |
| | Prior Foreign Application(s) | Priority Claimed |
| (Numbe | r) (Country) (Day/Month/Year filed) | Yes No |
| (Numbe | r) (Country) (Day/Month/Year filed) | Yes No |
| (Numbe | r) (Country) (Day/Month/Year filed) | Yes No |

I hereby claim the benefit under Title 35, United States Code, \$120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, \$112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, \$1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
| 07/155,207 | February 12, 1988 | Abandoned |
| 07/280,173 | December 5, 1988 | Pending |
| 07/341,436 | April 21, 1989 | Pending |
| 07/162,680 | March 1, 1988 | Abandoned |
| 07/318,901 | March 3, 1989 | Pending |
| 06/946,365 | December 24, 1986 | Pending |

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I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration No. | |
|-------------------|------------------|--------|
| James M. Smith | Registration No. | 28,043 |
| Leo R. Reynolds | Registration No. | 20,884 |
| Richard A. Wise | Registration No. | |
| Patricia Granahan | Registration No. | 32,227 |
| Mary Lou Wakimura | Registration No. | 31,804 |
| Thomas O. Hoover | Registration No. | 32,470 |
| Alice O. Carroll | Registration No. | 33,542 |

| and | |
|---|-------------------------|
| Send correspondence to: P HAMILTON, BROOK, SMITH & RE Two Militia Drive, Lexingto | |
| Direct telephone calls to: | Patricia Granahan, Esq. |
| 617-861-6240 | |

| Full name of sole | |
|------------------------|---|
| or first inventor | David Baltimore |
| Inventor's | ACOA. |
| Signature | Date 31 Dec 91 |
| Residence | President's House, Rockefeller Universit |
| | President's House, Rockefeller Universit 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of second jo | pint |
| inventor, if any | Ranjan Sen |
| Second Inventor's | |
| Signature | Date |
| Residence | Date |
| | Cambridge, MA 92139 |
| Citizenship | India |
| Post Office Address | same as above |
| Full name of third joi | nt |
| Third Inventor's | Phillip A. Sharp |
| Third inventor's | |
| Signature | Date |
| Residence | Date 119 Grasmere Street Newton, MA 02158 |
| Citizenship | Newton, MA 02158 U.S.A. |
| CICICEISIIID | U. S. A. |
| Post Office Address | same as above |
| ~ | |
| Full name of fourth jo | pint |
| inventor, if any | Harinder Singh |
| KANTED INVANTARIE | |
| Signature | Date |
| Residence | Date 1700 East 56th Street, #1309 Chicago, IL 60637-1934 |
| | Chicago, IL 60637-1934 |
| CICIZENSHID | India |
| Post Office Address | same as above |
| | |
| ~~~~~~~~~~~~~~~~~ | |

| Full name of fifth join | |
|---------------------------------|--|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | . 1 |
| Full name of sixth joir | |
| inventor, if any | Jonathan LeBowitz |
| Sixth Inventor's | Data |
| Signature | Date 27 Crescent Road Relmont, MA 02178 |
| Residence | 27 Crescent Road |
| | Delmone, in olive |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | .: |
| Full name of seventh jo | |
| | Albert S. Baldwin, Jr. |
| Seventh Inventor's | Data |
| Signature | Date |
| Residence | Date 34 South Gate Park West Newton, MA 02165 U.S.A. |
| | West Newton, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| Dull name of sighth is: | int |
| Full name of eighth jo | |
| inventor, if any | Rodel Cleic |
| Eighth Inventor's | Date |
| Signature Residence | 120 Parcons Poad |
| Residence | Brighton, MA 02135 |
| | |
| Citizenship Post Office Address | Switzerland |
| Post Office Address | same as above |
| | |
| | |
| Dull name of minth doi: | n.t. |
| Full name of ninth join | |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | Data |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| Citiconship | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |

| full name of tenth joint | |
|--|---|
| inventor, if anyFifth Inventor's | Patrick A. Daeuerre |
| @ 1 m Lucan a | Data |
| Signature_ | Am Bogen 25 |
| Residence | Am Bogen 25 D-8031 Eichenau, Germany Germany |
| all lease bla | Cormany |
| Citizenship | Germany same as above |
| Post Uffice Address | same as above |
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| منده ودن ودن المن خود | ا الله فيل فيده فيون فيل منه نمو شور هو فيه فيد |
| n.11 of .1 | |
| Full name of eleventh jo | oint |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | Date: |
| Signature | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. |
| Residence | 9117 Falls Chapel Way |
| | Potomac, MD 20854-2453 |
| Citizenship_ Post Office Address | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of twelfth jo | |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | 30 Warren Avenue, Apt. 2A |
| | Somerville, MA 02143 |
| Citizenship Post Office Address | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of thirteenth | joint |
| inventor, if any | |
| Eighth Inventor's | |
| Signature | Date |
| Residence | Date 456 Belmont Street, Apt. 17 Watertown, MA 02172 |
| | Watertown, MA 02172 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| در المراجع | |
| | • |
| Full name of fourteenth | : ioint |
| Income the same | |
| Ninth inventor's | |
| | Date |
| Signature | |
| Residence | |
| Citiconobin | |
| Citizenship | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

NUCLEAR FACTORS ASSOCIATED WITH TRANSCRIPTIONAL REGULATION

| | • | | | |
|--|--|---|--|-------------------------------|
| the spe | ecification of | which (check or | ne) | |
| | is attached he | reto. | | |
| <u>/xx/</u> | was filed on | November 13, 1 rial No. 07/79 d on | 7 000 | as (if applicable) |
| content | hereby state to s of the above , as amended by | -identified spe | ecification, | , including the |
| materia | acknowledge that to the examiting it is a constant. | nation of this | application | n in accordance |
| United patent identifiation inventor in | hereby claim f States Code, § or inventor's Tied below any or's certificat ation on which | 119 of any forcertificate list foreign applicate having a fill | eign applica sted below a ation for pa ing date bei | ation(s) for _ and have also- |
| | Prio | r Foreign Appl | ication(s) | Priority Claimed |
| (Number | c) (Country) | (Day/Month/Ye | ar filed) | Yes No |
| (Number | r) (Country) | (Day/Month/Yes | ar filed) | Yes No |
| (Number | c) (Country) | (Day/Month/Ye | ar filed) | Yes No |
| | | | | |

; --

I hereby claim the benefit under Title 35, United States Code, \$120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, \$112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, \$1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
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| 07/162,680 | March 1, 1988 | Abandoned |
| 07/318,901 | March 3, 1989 | Pending |
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As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration No. 22,592 |
|-------------------|-------------------------|
| James M. Smith | Registration No. 28,043 |
| Leo R. Reynolds | Registration No. 20,884 |
| Richard A. Wise | Registration No. 18,041 |
| Patricia Granahan | Registration No. 32,227 |
| Mary Lou Wakimura | Registration No. 31,804 |
| Thomas O. Hoover | Registration No. 32,470 |
| Alice O. Carroll | Registration No. 33,542 |
| | |

| and | |
|--|-------------------------|
| | atricia Granahan, Esq. |
| HAMILTON, BROOK, SMITH & RE Two Militia Drive, Lexingto | |
| Direct telephone calls to: | Patricia Granahan, Esq. |
| 617-861-6240 | |

| Full name of sole | |
|-----------------------------|--|
| or first inventor | David Baltimore |
| Inventor's | |
| Signature | Date |
| Residence | President's House, Rockefeller Universit |
| | 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | · |
| Full name of second jo | |
| inventor, if any | Ranjan Sen |
| Second Inventor's Signature | |
| Residence | 236 Allston Street 104 KINN/ Cambridge, MA 92139. CAMBRIDGE |
| | Cambridge, MA 92139 CAMBRIDGE |
| Citizenship | India |
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| | |
| Full name of third joi | |
| inventor, if any | Phillip A. Sharp |
| Third Inventor's | |
| Signature | Date |
| Residence | 119 Grasmere Street |
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| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of fourth jo | |
| inventor, if any | Harinder Singh |
| Fourth Inventor's Signature | Date 1700 East 56th Street, #1309 Chicago, IL 60637-1934 |
| Residence | 1700 East 56th Street, #1309 |
| | Chicago, IL 60637-1934 |
| Citizenship | India |
| Post Office Address | same as above |
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| Full name of fifth join | nt |
|--------------------------------------|---|
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| Signature Residence | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 U.S.A. |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of sixth joi: | |
| inventor, if any | Jonathan LeBowitz |
| Sixth Inventor's | |
| Signature | Date 27 Crescent Road |
| Residence | 27 Crescent Road |
| | Belmont, MA UZI/8 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of seventh j | |
| inventor, if any | Albert S. Baldwin, Jr. |
| Seventh Inventor's | |
| Signature | Date |
| Residence | 34 South Gate Park |
| | West Newton, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | • |
| Full name of eighth jo | |
| inventor, if any | Roger Clerc |
| Eighth Inventor's | |
| SignatureResidence | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| | Switzerland |
| Post Office Address | same as above |
| | |
| | # 10 m 10 |
| _ ,, | |
| Full name of ninth joi | |
| | |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | |
| Ninth inventor's Signature | Date |
| Ninth inventor's | Date |
| Ninth inventor's Signature Residence | Date 109 Beacon Street, Apt. 1 Boston, MA 02116 |
| Ninth inventor's Signature | Date |

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| Eull name of tenth join | |
|--|--|
| inventor, if any | Patrick A. Baeuerle |
| Fith Inventor's | • |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
| | |
| \$24 day | |
| | |
| Full name of eleventh j | oint |
| inventor, if any | Michael J. Lenardo |
| | |
| Signature | Date Palla Chanal Way |
| Residence | 9117 Falls Chapel Way |
| | Date 9117 Falls Chapel Way Potomac, MD 20854-2453 U.S.A. |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
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| Bull none of tour letters. | • • |
| Full name of twelfth jo | Chong Wine Day |
| inventor, if any Seventh Inventor's | Chen-mind ran |
| Seventh inventor's | Date |
| Posidona | Date 30 Warren Avenue, Apt. 2A Somerville, MA 02143 |
| Residence | Somerville Wh. 02142 |
| | |
| Post Office Address | Taiwan same as above |
| | Dame as above |
| | |
| | |
| Full name of thirteenth | ioint |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
| Signature | Date |
| Residence | Date 456 Belmont Street, Apt. 17 |
| | Watertown, MA 02172 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of fourteenth | ·joint |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | |
| | |
| Citizenshin | |
| Dook Office 133mc | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| NUCLEAR | FACTORS ASSO | CIATED WITH | TRANSCRI | PTIONAL RI | EGULATION |
|--|--|---|--|---|----------------------------------|
| | • | | | | |
| the spec | ification of | which (check | c one) | | |
| i | s attached he | reto. | • | | |
| A | as filed on _ pplication Se nd was amende | rial No. <u>07</u> | , 1991 /791,898 | as (if | applicable). |
| contents | ereby state to of the above as amended by | -identified | specific | ation, inc | luding the |
| material | cknowledge th to the exami le 37, Code o | nation of the | nis appli | cation in | accordance |
| United S patent o identifi inventor | ereby claim for tates Code, Sor inventor's ed below any cortificate ion on which | 119 of any : certificate foreign app; e having a : | foreign a listed b lication filing da | pplication elow and h for patent te before | n(s) for _ nave also- c or |
| | Prio | r Foreign A | pplicatio | on(s) | Priority Claimed |
| (Number) | (Country) | (Day/Month | /Year fi] | .ed) | Yes No |
| (Number) | (Country) | (Day/Month | /Year fil | led) | Yes No |
| (Number) | (Country) | (Day/Month | /Year fil | led) | Yes No |

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|-------------------|--------------|-----|--------|
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| Leo R. Reynolds | Registration | No. | 20,884 |
| Richard A. Wise | Registration | No. | 18,041 |
| Patricia Granahan | Registration | No. | 32,227 |
| Mary Lou Wakimura | Registration | No. | 31,804 |
| Thomas O. Hoover | Registration | No. | 32,470 |
| Alice O. Carroll | Registration | No. | 33,542 |

all of Hamilton, Brook, Smith and Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02173;

Send correspondence to: Patricia Granahan, Esq.
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Two Militia Drive, Lexington, MA 02173

Direct telephone calls to: Patricia Granahan, Esq.
617-861-6240

| Full name of sole | |
|---|--|
| or first inventor | David Baltimore |
| Inventor's | |
| Signature | Date |
| Residence | President's House, Rockefeller Universit |
| | 1230 York Avenue, New York, NY 10021 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| Full name of second jo | int |
| inventor, if any | Ranjan Sen |
| Second Inventor's | |
| Signature | Date 236 Allston Street |
| Residence | 236 Allston Street |
| | Cambridge, MA 92139 |
| Citizenship | India |
| Post Office Address | same as above |
| Full name of third joi inventor, if any | nt |
| Third Inventor's | |
| Signature / | Date //3/92 |
| Residence | Date // ?/ 92 |
| | Newton, MA 02158 |
| Citizenship | U.S.A. |
| | same as above |
| | |
| Full name of fourth jo | oint |
| inventor, if any | |
| Fourth Inventor's | |
| Signature | Date |
| Residence | 1700 East 56th Street, #1309 |
| | Chicago, IL 60637-1934 |
| Citizenship | India |
| Post Office Address | same as above |
| ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | |

| | -4- · |
|------------------------|---|
| Full name of fifth jo | |
| inventor, if any | Louis Staudt |
| Fifth Inventor's | |
| _ Signature | Date |
| Residence | 9309 Greyrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ |
| Full name of sixth jo. | |
| inventor, if any | Jonathan LeBowitz |
| Sixth Inventor's | |
| Signature | Date |
| Residence | Date 27 Crescent Road Belmont, MA 02178 |
| | |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of seventh | joint |
| | Albert S. Baldwin, Jr. |
| Seventh Inventor's | |
| Signature | Date |
| Residence | Date 34 South Gate Park |
| | West Newton, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| Full name of eighth jo | oint |
| inventor, if any | |
| Eighth Inventor's | |
| Signature | Date |
| Residence | 129 Parsons Road |
| | Brighton, MA 02135 |
| Citizenship | Switzerland |
| Post Office Address | same as above |
| | |
| | |
| Full name of ninth jos | int |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |

| Full name of tenth joint | |
|---|---|
| | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | Am Bogen 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of eleventh j | oint |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
| Signature | Date Palls Changl Warr |
| Residence | 9117 Falls Chapel Way |
| | Potomac, MD 20854-2453 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | ov marren avenue, apt. ZA |
| | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| _ | |
| Full name of thirteenth | |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | |
| Signature | Date |
| Residence | Date 456 Belmont Street, Apt. 17 Watertown, MA 02172 |
| | |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | |
| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| Residence | |
| | |
| Citizenship | |

As a named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

| NUCLE | AR FAC | TORS ASSO | CIATED WIT | TH TRANS | SCRIPTION | AL REC | SULATIO | N N |
|-----------------------------|------------------------------------|--|--|--|--|--------------------------|--------------------------|-----------|
| the spe | ecifica | ation of v | which (che | ck one) | | | | |
| | is at | tached her | reto. | | | | | |
| <u>[xx]</u> | Appli | iled on _ cation Ser as amended | November rial No | 13, 199 07/791, | 000 | as (if a | applica | ble). |
| content | ts of | the above | nat I have -identifie any amend | d speci | fication, | , incl | luding | e the |
| materia | al to | the examin | e duty to nation of f Federal | this ap | plication | n in a | ccorda | is nce |
| United patent identi invent | State or in fied b or's c | s Code, \$ ventor's (elow any : ertificate | oreign pri 119 of any certificat foreign ar e having a priority i | foreigned for foreigned foreigned for foreigned foreigned for foreigned foreigned for foreigned foreigned for foreigned for foreigned for foreigned foreigned for foreigned for foreigned foreigned foreigned foreigned for foreigned foreigned for foreigned for foreigned foreig | n applicated below a lon for part of the longer than the longe | ation and ha atent | (s) for ave als or | 0- |
| | | Prio | r Foreign | Applica | tion(s) | | Prior Clai | |
| (Numbe | r) (| Country) | (Day/Mont | th/Year | filed) | | /Yes | /_/ |
| (Numbe | r) (| Country) | (Day/Mont | h/Year | filed) | | Yes / | No |
| (Numbe | r) (| Country) | (Day/Mont | th/Year | filed) | *********** | Yes / | No |

hae

I hereby claim the benefit under Title 35, United States Code, \$120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, \$112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, \$1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

| 06/817,441 | January 9, 1986 | Abandoned |
|------------|-------------------|-----------|
| 07/155,207 | February 12, 1988 | Abandoned |
| 07/280,173 | December 5, 1988 | Pending |
| 07/341,436 | April 21, 1989 | Pending |
| 07/162,680 | March 1, 1988 | Abandoned |
| 07/318,901 | March 3, 1989 | Pending |
| 06/946,365 | December 24, 1986 | Pending |

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

I also hereby grant additional Powers of Attorney to the following attorney(s) and/or agent(s) to file and prosecute an international application under the Patent Cooperation Treaty based upon the above-identified application, including a power to meet all designated office requirements for designated states.

| David E. Brook | Registration No. | 22,592 |
|-------------------|------------------|--------|
| James M. Smith | Registration No. | 28,043 |
| Leo R. Reynolds | Registration No. | 20,884 |
| Richard A. Wise | Registration No. | 18,041 |
| Patricia Granahan | Registration No. | 32,227 |
| Mary Lou Wakimura | Registration No. | 31,804 |
| Thomas O. Hoover | Registration No. | 32,470 |
| Alice O. Carroll | Registration No. | 33,542 |

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|--|-------------------------|--|--|
| Send correspondence to: Patricia Granahan, Esq. HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive, Lexington, MA 02173 | | | |
| Direct telephone calls to: | Patricia Granahan, Esq. | | |
| 617-861-6240 | | | |

| Full name of sole | | | |
|--|---|--|--|
| or first inventor | David Baltimore | | |
| Inventor's | | | |
| Signature | Date | | |
| Kesidence | Piesident S nouse, kockeleller university | | |
| | 1230 York Avenue, New York, NY 10021 | | |
| CitizenshipPost Office Address | U.S.A. | | |
| Post Office Address | same as above | | |
| Full name of second jo | | | |
| inventor, if any | Ranjan Sen | | |
| Second Inventor's | | | |
| Signature | Date | | |
| Residence | 236 Allston Street | | |
| | Cambridge, MA 92139 | | |
| Citizenship | India | | |
| Post Office Address | same as above | | |
| Full name of third joi inventor, if any Third Inventor's | nt Phillip A. Sharp | | |
| Signature | Date | | |
| Residence | Date 119 Grasmere Street | | |
| - | Newton, MA 02158 | | |
| Citizenship | U.S.A. | | |
| Post Office Address | same as above | | |
| Full name of fourth jo | int | | |
| inventor, if any | Harinder Singh | | |
| Fourth Inventor's // | winder Snigh Date 1/9/92 | | |
| Residence | 1700 East 56th Street, #1309 | | |
| | Chicago, IL 60637-1934 | | |
| Citizenship | India | | |
| Post Office Address | same as above | | |
| | | | |

| Full name of fifth joir | nt |
|-----------------------------------|---------------------------|
| inventor, if any | Louis Standt |
| Fifth Inventor's | |
| Signature | Date |
| Residence | 9309 Grevrock Road |
| | Silver Springs, MD 20910 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| | |
| Pull name of sinth isin | |
| Full name of sixth joir | 1t |
| inventor, if any Sixth Inventor's | Jonathan LeBowitz |
| | 5 |
| Signature Residence | Date |
| nestucinee | 27 Crescent Road |
| | Belmont, MA U21/8 |
| Post Office Address | U.S.A. same as above |
| | Same as above |
| | |
| | |
| Full name of seventh jo | oint |
| inventor, if any | Albert S. Baldwin, Jr. |
| Seventh Inventor's | |
| Signature | Date |
| Residence | 34 South Gate Park |
| | WEST NEWCON, MA 02165 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
| | |
| | |
| Full name of eighth joi | n.t- |
| inventor if any | Danier Olavie |
| inventor, if any | Roder Clerc |
| Signature | Data |
| Residence | Date |
| | Brighton, MA 02135 |
| Citizenship | |
| Post Office Address | same as above |
| 4 | same as above |
| | |
| | |
| Full name of ninth join | t |
| inventor, if any | Lynn M. Corcoran |
| Ninth inventor's | |
| Signature | Date |
| Residence | 109 Beacon Street, Apt. 1 |
| | Boston, MA 02116 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |

| Full name of tenth join | t " |
|---|--------------------------------|
| inventor, if any | Patrick A. Baeuerle |
| Fifth Inventor's | • |
| Signature | Date |
| Residence | An Boden 25 |
| | D-8031 Eichenau, Germany |
| Citizenship | Germany |
| Post Office Address | same as above |
| | |
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| | |
| Full name of eleventh j | oint |
| inventor, if any | Michael J. Lenardo |
| Sixth Inventor's | |
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| Post Office Address | same as above |
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| | |
| Full name of twelfth jo | int |
| inventor, if any | Chen-Ming Fan |
| Seventh Inventor's | |
| Signature | Date |
| Residence | Date 30 Warren Avenue, Apt. 2A |
| | Somerville, MA 02143 |
| Citizenship | Taiwan |
| Post Office Address | same as above |
| | |
| | |
| | |
| Full name of thirteenth | joint |
| inventor, if any | Tom Maniatis |
| Eighth Inventor's | • |
| Signature | Date |
| Residence | 456 Belmont Street, Apt. 17 |
| | Water town, MA 021/2 |
| Citizenship | U.S.A. |
| Post Office Address | same as above |
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| Full name of fourteenth | |
| inventor, if any | |
| Ninth inventor's | |
| Signature | Date |
| VAC160000 | |
| | |
| Citizenship | |